

## NOTES ON AUSTRALIAN *COLEOPTERA*, WITH DESCRIPTIONS OF NEW SPECIES.

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(Plates iv.-v.)

This paper originated from notes on material collected by Mr. A. M. Lea and myself in January, 1918, during a visit to the western districts of Tasmania—especially to Cradle Mountain, Wilmot, Waratah, and Strahan. The new insect life discovered through Mr. Lea's painstaking sifting of moss—especially moss growing on trees, so prolific in those moist regions—demands new generic names for small but interesting members of the fungus-eating *Tenebrionidae* (*Bolitophaginae*).

An examination of the *Tenebrionidae* and *Buprestidae* in the fine collection made by the late Mr. Augustus Simson, of Launceston, and acquired by the South Australian Museum, has given me special information on Tasmanian species that seems worth recording.

The remainder of the paper deals with miscellaneous material that has either accumulated in my own collection, or has been sent for identification from the National Museum, Melbourne. A table of the genera of the Subfamily *Ulominæ* is included, which may help students to a more ready identification of a difficult and cosmopolitan group of insects, which comprise some notorious grain pests.

### BUPRESTIDÆ.

The following list contains the fourteen species of *Stigmodera* that I know to have been taken in Tasmania; the four species marked with an asterisk are found only in Tasmania. *S. australasica* C. & G., *S. bremeri* Hope, *S. cyanipes* Saund, *S. dimidiata* Cart. (with its var. *leai* Cart.), *S. erythromelas* Boisd., *S. flavopicta* Boisd., \**S. insularis* Blackb., \**S. jubata* Blackb., *S.*

*mitchelli* Hope, \**S. ocelligera* C. & G., *S. octospilota* C. & G., *S. Thomsoni* Saund. (with its var. *dulcis* Blackb.), \**S. virginea* Erichs., *S. Wilsoni* Saund.

Four of the above, together with *S. viridis* (a Victorian variety of *S. cyanicollis* Boisd., found also at King Island, Bass Strait) are often so alike in size and colour (metallic green, rarely blue, with or without yellow markings) that it may be useful to note the distinguishing characters.

*S. virginea* Erichs.—Each elytron with four carinate costæ; the yellow markings are a shoulder spot, two straggling, often disjointed and thin fasciæ, the first median, the second ante-apical, generally with one elongate spot between the first and second costæ opposite the shoulder spot, sometimes with an irregular yellow line at apical sides. Pronotum irregularly, not closely, punctate. *Dimensions*:  $8.13\frac{1}{2} \times 3.5\frac{1}{2}$  mm.

*Hab.*—Strahan, Waratah, West Coast.

*S. flavopicta* Boisd.—The typical form has an oval shoulder spot, a long, fiddle-shaped band from base to sides, and a latero-apical band. The intervals are almost smooth, or very faintly punctate; the pronotum is closely punctate. The prothorax is very convex, with its sides widely and evenly rounded. Varieties contain every possible variation of colour to be found by omitting parts of the yellow markings, down to a concolorous metallic green. *Dimensions*:  $8.11 \times 3.4$  mm

*Hab.*—Hobart, Launceston, Strahan, &c. The commonest of the Tasmanian species.

*S. ocelligera* C. & G.—An elongate, orange shoulder spot, a wide, subapical, orange fascia surrounding a green centre on each elytron, intervals minutely punctate and wrinkled, pronotum very closely punctate. *Dimensions*:  $9.11 \times 3\frac{1}{2}.4$  mm.

*Hab.*—Bellerive (Hobart).

*S. dimidiata* Cart.—The typical form has a small shoulder spot, a median fascia widely separated at the suture, a narrow, arcuate, preapical fascia, joining a well-marked, latero-apical band. The intervals closely and rather coarsely punctate, the pronotum *not* closely punctate.

Var. *leai* Cart., is without the median fascia. [N.B.—In the

original description (Trans. Roy. Soc. S. Aust., 1916, p 136) it was suggested that *S. leai* was a variety of *S. cyanicollis* Boisd., but I have since clearly discerned the distinctions from that species in sculpture]. Both *S. dimidiata* and *S. leai* are in the Simson Coll. from the W. Coast of Tasmania. *Dimensions*:  $9.12 \times 3\frac{1}{2}-4\frac{1}{2}$  mm.

*Hab.*—Tasmania: W. Coast and Huon River.—N.S.W.: Blue Mountains and Sydney.

*S. cyanicollis* Boisd, var. *viridis* C. & G.—An elongate shoulder spot, subapical lateral spot. Pronotum densely, elytral intervals very finely punctate. *Dimensions*:  $10 \times 4$  mm.

*Hab.*—King Island, Bass Strait; and Victoria.

The five species may be tabulated as follows:—

Tasmanian *Stigmodera*, having metallic green surface, with yellow markings.

1. Each elytron with four carinate costae ..... *virginica* Erichs.
- 2-8. Elytral intervals normal.
3. Prothorax strongly convex, sides widely and evenly rounded.....  
..... *flavopicta* Boisd.
- 4-8. Prothorax lightly convex, sides arcuately converging to apex.
5. Each elytron with wide, preapical, orange band, surrounding a green spot ..... *ocelligera* C. & G.
- 6-8. Elytra not as in 5.
7. Elytral intervals strongly punctate, pronotal punctures not close.....  
..... *dimidiata* Cart.
8. Elytral intervals minutely punctate, pronotal punctures densely crowded  
..... *cyanicollis* Boisd., var. *viridis* C. & G.

#### STIGMODERA OCTO-SIGNATA, n.sp. (Plate iv., fig.1).

Navicular, convex, finely attenuated behind; head blue, pronotum and groundcolour of elytra metallic blue-black (pronotum showing opalescent gleams on sides), elytra each with four yellow spots, the first oval, near scutellum, the second triangular, on sides near shoulder, the third round, medial, the fourth smaller than third, half way between the third and the apex; underside, legs, and antennæ deep blue.

*Head* channelled, strongly punctate. *Pronotum* convex, sides evenly rounded, all angles acute, apex feebly arcuate, base strongly sinuate, the middle lobe produced backwards;

disc densely and finely punctate, the median line irregularly indicated by smooth spaces, a large, pre-scutellary fovea and two transverse depressions near hind angles. *Scutellum* triangular, punctate, brilliant green. *Elytra* impressed near shoulders, sides entire to apex, striate-punctate, the intervals regular, convex, and impunctate, apices finely and obliquely lunate; prosternum transversely strigose, the flanks punctate; abdomen with sparse, fine pubescence. *Dimensions*: 10-11  $\times$  3-3½ mm.

*Hab.*—Kuranda (F. P. Dodd).

Two examples, the sexes, from Mr. Dodd show a species of the *S. mansueta*, *S. laena* group in my classification. In form near *S. elongatula* MacL., its apical structure is like that of *S. atricollis* Saund. The groundcolour is apparently black, but in a strong light shows metallic and even coppery gleams on the forehead and sides of pronotum. In my Table (Trans. Roy. Soc. S. Aust., 1916, p.101) it should be placed as follows:—

152. Pronotum without medial sulcus.

152a. Groundcolour violet, apices trispinose ..... *laena* Thomas.

152b. Groundcolour blue-black, apices bispinose..... *octosignata*, n.sp.

In the ♀ specimen, the basal and median spots coalesce and form an irregular vitta—a common variation with this class of pattern.

Types in Coll. Carter.

## TENEBRIONIDÆ.

*EXANGELTUS RUFIPENNIS*, n.sp. (Plate iv, fig.2).

Elongate, subparallel, convex. Head and prothorax opaque black; elytra, antennæ, and tarsi dull red, legs and underside piceous red, whole surface lightly clothed with pale, recumbent hair.

*Head* rather sharply rounded and ciliate in front, without any suture to separate epistoma from frontal area; eyes large and prominent, surface rough and rather thickly clad with recumbent hair, a small, nitid, black tubercle at middle, near prothorax; antennæ rather long, its joints sublinear, first two very short, joint 3 as long as 4-5 combined, 4-8 successively shorter, 9 longer



than 8, 10-11 very short and nearly round, 11 smaller than 10. *Prothorax* subsinuate at apex, subtruncate at base, sides well rounded, greatest width slightly in front of middle, lightly sinuate behind; anterior angles obtuse, posterior sharply rectangular, surface rugose (apparently longitudinally strigose under thin clothing of hair). *Scutellum* oval. *Elytra* wider than prothorax at base and thrice as long, covered with a number (about 16) of closely placed striæ each containing closely placed, large, square punctures, not cancellate as in *E. gracilior* Blackb.; hairy clothing more obvious at sides and apex. Underside and epipleuræ closely and coarsely punctate, each puncture bearing a short hair; legs thin, tibiæ not enlarged nor spined at apex. *Dimensions*:  $13 \times 5$  mm.

*Hab.*—Chillagoe, N. Queensland (National Mus., Melbourne).

A specimen, sex uncertain, sent by Mr. Kershaw, shows near affinity to Blackburn's two species, from which it is clearly separated by larger size, bicolorous surface, coarser sculpture, hairy clothing and antennæ (the tenth joint sharply differentiated from ninth in size and shape).

N.B. I have identified specimens of *E. angusta* Blackb., from Perth, W.A., and have seen other examples from widely distant parts of that State. My specimens of *E. gracilior* Blackb., are from Lillimur, Victoria, and correspond well with the description except in their larger size ( $11 \times 3\frac{1}{2}$  mm.).

#### M N I O N O P H I L U S, n.g. Bolitophaginarum.

Convex, widely ovate or obovate; mandibles bifid, last joint of maxillary palpi clavate, of labial palpi subulate, maxillæ fringed (at least in *M. costatus*), antennæ rather short (not extending to base of prothorax), with joint 2 as long as, but much stouter than, joint 3, the apical two forming a pronounced club; prosternum not produced backward, sides of pronotum explanate, serrated or toothed, body more or less nodulose and squamose, tibiæ unspined at apex, tarsi and tarsal claws short; intercoxal spaces wide.

Minute insects with a facies of *Mychestes*, remarkable for the length of the second joint of antennæ.

*MNIONOPHILUS HORRIDUS*, n.sp.

Widely ovate and convex, reddish-brown, underside opaque brown, antennae and tarsi pale red; whole surface shagreened and pilose with sparse, upright, spiny bristles.

*Head* large, epistoma truncate, labrum emarginate, canthi forming two large, convex lobes, eyes large, round, and coarsely faceted; antennae: joint 1 long, stout and cylindrical, 2 clavate, as long as 1, 3 slender, obconic, 4-8 gradually shorter, more or less triangular, 9-10 cupuliform, 9 intermediate in size between 8 and 10, 11 ovate-acuminate, one and a half times as long as 10. *Prothorax* widely transverse, widest at middle, explanate at apex and sides, truncate at base; apex overhanging head, of uneven outline, notched in middle, with about eight, strong, straight bristles pointing forward; disc strongly raised, the middle part consisting of two elongate, convex lobes, one on each side of medial depression; surface pustulose, each pustule bearing a short, curled bristle, margins more or less flat, outlined by six broad teeth, each bearing a spiny bristle, the space between the sixth tooth and the truncate base forming an oblique, curved excision. *Scutellum* not evident. *Elytra*: the base terminating in two dentate processes, fitting the excision in the pronotum, thence obliquely widening to a widely rounded, humeral callus, thence ovately widening to behind half-way; apex abruptly and sharply pointed; disc uneven, coarsely bristled, the sculpture near suture consisting of large punctures in a longitudinal arrangement, with six large, conical nodules, four of these on the apical declivity, and two wide, sinuous costae starting from middle of base and more or less continued obliquely outwards, derm with two kinds of bristles, the closer kind short and curved, the sparser long and upright. Underside and legs with short, white bristles, tibiae not serrated. *Dimensions*: 3 mm. long (vix)  $\times$   $1\frac{1}{2}$  mm. wide.

*Hab.*—Cradle Mountain, Tasmania.

Three specimens taken by Mr. Lea by sifting moss from trees; also in Coll. Simson. A spiky insect; the anterior angle of the prothorax consists of the widest of the six lateral teeth referred

to above; the elytral part is shaped somewhat as in some species of *Leptops*.

Type in Coll. Carter; two cotypes in S. Australian Museum.

*MNIONOPHILUS COSTATUS*, n.sp.

Elongate-ovate, convex, reddish-brown, moderately nitid, underside dull brown (the raised parts castaneous), legs, antennæ, and palpi castaneous, elytra, tibiæ, and antennæ with short, sparse, white hairs.

*Head* less wide than in *M. horridus*, epistoma rounded, canthus moderately raised, eyes large, surface pustulose, antennæ with joints 1-3 of equal length, but successively thinner, 4 subconic, shorter than 3, 5-8 moniliform, 9 wider than 8 and oval, 10 strongly transverse and rounded,  $1\frac{1}{2}$  times as long as 9, 11 pear-shaped, as wide as and longer than 10. *Prothorax* truncate at base, widest near basal excision, trilobed at apex, middle lobe overhanging head, with round excision at middle; exterior lobes forming widely emarginate front angles; whole surface rather closely pustulose, margin widely explanate, serrated externally with about twelve irregular serrations; suddenly excised near base, the excision showing a pustulose outline. *Scutellum* not evident. *Elytra* elongate-obovate, of same width as prothorax at base, thence very slightly widening till near apex; each elytron with about three slightly raised, shining costæ, terminating in small nodules near apex, suture also costate; between the costæ are two rows of large, square, foveate punctures, the intervals forming a raised, shining network, tibiæ uneven but scarcely serrate on outer edge. *Dimensions*: 3 mm. long, 1 mm. wide.

*Hab.*—Waratah, Tasmania.

Two specimens, taken by Mr. Lea in moss, differ from *M. horridus* in the smoother derm, more elongate form, more parallel sides of prothorax, with distinct anterior angles to the last.

Type in Coll. Carter.

*ENHYPNON*, n.g. Bolitophaginarum.

Sides of pronotum involute, tibiæ strongly serrated on outside, other characters as in *Mnionophilus*; body having the general facies of *Otiorrhyncus*.

## ENHYPNON LATICEPS, n.sp.

Ovate, opaque reddish-brown above, piceous beneath, antennæ and tarsi pale red.

*Head* very wide, epistoma short and square, canthus wide and protuberant, eyes very large, round, and coarsely faceted, forehead flat and asperate, antennæ with joint 1 long, stout, cylindric; 2 subconic, as long as, but less stout than, 1; 3 subconic, slender, not as long as 4-5 jointly; 4-5 subconic; 6-8 moniliform; 9 transverse, intermediate in width between 8 and 10; 10 cupuliform, nearly twice as wide as 9; 11 ovate, as wide as 9 and  $1\frac{1}{2}$  times as long. *Prothorax* very convex, subtruncate at base, at apex produced forward and overlapping the head (as in *Mychestes*), and notched in the middle by the medial channel, anterior angles obsolete, the sides enveloping the body, showing crenulations formed by row of rounded knobs, posterior angles widely obtuse; widest behind middle (here slightly wider than head); surface pustulose and clothed with short, pale hair. *Scutellum* triangular. *Elytra* as wide at base as prothorax, convex and widely obovate, surface pustulose, with hairy clothing following the lines of three faint costæ on each elytron, these terminating on apical declivity in large nodules, the middle one in front of the other two; abdomen covered with round, slightly raised, nodulose impressions, legs beneath with sparse hairs, gular region smooth, fore-tibiæ strongly, mid- and hind-tibiæ minutely serrated on outside edge. *Dimensions*: 3 mm. long (vix)  $\times 1\frac{1}{2}$  wide.

*Hab.*—Cradle Mountain, Strahan, and Waratah, Tasmania.

Two specimens taken by Mr. Lea from moss are probably the sexes, since, in one specimen, the joints forming the antennal club are less widened.

*Types* in Coll. Carter.

Five more specimens since sent by Mr. Lea for examination, from Strahan, show some variations in colour from pale red to brown, while the apical nodules are variable in size. One of these shows such variation as to suggest another species.

Table of Australian *Ulominæ* (including cosmopolitan genera recorded from Australia).

1(14) Antennæ clavate (apical joint or joints abruptly enlarged).

2(11) Tibiæ not denticulate on outside edge.

3. Head of male horned ..... (1) GNATHOCERUS Thun.  
 4(11) Head of male without horns.  
 5(7) Elytra striate-punctate.  
 6. Antennal club 4-jointed ..... (1) TRIBOLIUM Muls.  
 7. Antennal club 1-jointed ..... (3) MICRULOMA, n.g.  
 8. Elytra seriate-punctate, antennal club 3-jointed... (3) MICROCILIPE, n.g.  
 9(11) Elytra irregularly punctate.  
 10. Form cylindric, antennal club 4-jointed .....  
 ..... (2) LYPHIA Muls.; LINDIA Blackb.  
 11. Form depressed, antennal club 3-jointed ..... (3) MESOTRETIS Bates.  
 12(14) Tibiæ (front and mid at least) denticulate.  
 13. Form depressed, antennal club 4-jointed ..... (3) PLATYCILIPE Cart.  
 14. Form convex, antennal club 2- or 3-jointed ... (3) BRACHYCILIPE Cart.  
 15(27) Antennæ not clavate ( joints gradually enlarged).  
 16(22) Tibiæ not denticulate on outside edge.  
 17. Head of male horned (at least in *S. hololeptoides* Cast.) .....  
 ..... (1) SITOPHAGUS Muls.  
 18(22) Head of male without horns.  
 19(21) Elytra striate-punctate.  
 20. Form moderately convex, antennæ short ..... (1) PALORUS Muls.  
 21. Form depressed, antennæ long ..... (3) ULMOIDES Blackb.  
 22. Elytra irregularly punctate... (2) HYPOPHLEUS F.; CORTICEUS Crotch.  
 23(27) Tibiæ denticulate (except in *Uloma torrida* Cart.).  
 24(26) Species with eyes.  
 25. Males with depression on prothorax, tibiæ enlarged at apex.. .....  
 ..... (2) ULOMA Cast.; ACTHOSUS Pasc.  
 26. Without sexual distinction on prothorax, tibiæ little enlarged at apex.  
 ..... (1) ALPHITOBIVS Steph.; (3) TYPHLULOMA Lea.  
 27. Blind.  
 (1) Genera containing cosmopolitan species—mostly grain pests.  
 (2) Genera containing species from every continent (*Lypbia* not recorded from America).  
 (3) Genera recorded only from Australia, Norfolk Island, or Lord Howe Island.

Synonymy: *Uloma* Casteln. = *Acthosus* Pasc.—This synonymy was suggested by Blackburn (Trans. Roy. Soc. S. Aust., 1894, p.219), and I entirely concur.

*Sitophagus* (*Ipsaphes*) *nitidulus* MacL. After an examination of the type in the Australian Museum (so far as is possible with a carded specimen in which the legs are scarcely visible), I have little doubt that it belongs to the Cucujidæ, probably to the genus *Platysus*. It seems to have been placed amongst the Tene-

brionidae through Olliff's note, "*Ipsaphes nitidulus* of Macleay appears to be allied to the heteromerous genus *Sitophagus*" (These Proc., Vol. x., Part 2, p.7). The genus *Sitophagus* is only represented in Australia by the ubiquitous *S. hololeptoides* Cast., of which I have specimens taken in Sydney.

*Ulomoides humeralis* Blackb., *Hypophleus australis* Champ.—Of these two I possess cotypes, kindly presented by the authors.

*Campanotus fimbriicollis* Lea.—This insect was placed with some doubt amongst the *Ulomina*; but I consider that the foliate prothorax, and *carinate prosternum, inter alia*, point rather to a position under *Cyphaleinae*, near *Barytipha* and *Mithippia*; it has, therefore, been omitted from my Table.

*Platydemia spicata* Olliff = *P. striata* Montr.—Amongst the many things taken by Mr. Lea at Lord Howe Island, occurs the above, which is however, identical with *P. striata* Montr. = *P. kanalense* Perroud = *P. oritica* Pasc., a much named insect, recorded also from New Caledonia.

It may be of use to note here the synonymy pointed out by Mr. K. G. Blair (Ann. and Mag. Nat. Hist., Ser. 8., xiii., 1914).

*Acthosus sanguinipes* F., (Tenebrio) = *laticornis* Pasc., and must now appear as *Uloma sanguinipes* F.

*Alphitobius levigatus* F., (Opatrum) = *piceus* Ol., = *Microphyes rufipes* Macl.

*Uloma* (*Acthosus*) *minuta* Cart.—On a re-examination of this species with a Zeiss binocular—not available when I described the species in 1906—I find characters inconsistent with its inclusion in *Uloma*; while the antennæ were incorrectly described as having the final four joints enlarged. I now propose the name *Micruloma* for the reception of this insect, a genus having the following distinctions from *Uloma*.

#### MICRULOMA, n.g. Ulominarum.

*Antennæ* with apical joint greatly enlarged and ovate; the 10th only slightly wider than preceding joints and forming a cup for the reception of the one-jointed club; other joints small and closely fitting. All coxæ widely separated: prosternum between fore-coxæ almost flat; intercoxal parts between mid- and

post-coxæ without any triangular depression; femora swollen, tibiæ without external spines. Facies above very similar to *Palorus*, but slightly flatter, with the anterior angles more rounded, and widely differing in the antennæ, the position of the coxæ, and the swollen femora.

*Uloa (Acthosus) pygmaea* Cart.—Having recently received, through the courtesy of Mr. G. C. Champion, specimens of four species of *Palorus*, namely, *P. austrinus* Champ., *P. depressus* F., *P. subdepressus* Woll., and *P. Ratzeburgi* Wissm., I find that *U. pygmaea* is congeneric with these. More robust than *P. austrinus*, its pronotal and elytral punctures are finer, with the punctures on the medial elytral interstices irregular (not seriate). The proportions of the antennal joints are very similar. The name is very unfortunate, since while being a pigmy amongst *Uloa*, it is larger than either of the four species of *Palorus* under examination. It must now stand as *Palorus pygmaeus* Cart.

*P. Ratzeburgi* Wissm.—Three specimens in my cabinet from Sydney (Mr. DuBoulay and myself), and two from Cairns (A. M. Lea) are identical with this cosmopolitan grain pest. [The distinctions between the species of *Palorus* have been very thoroughly treated by Champion (Ent. Mo. Mag., 2nd Ser., Vol. vii., Feb. 1896)].

#### MICROCILIBE, n.g. Ulominarum.

Elongate-ovate, convexity as in *Palorus*, antennæ with apical three joints abruptly enlarged—9 cupuliform, 10 rhomboidal, 11 ovate and largest—tibiæ without spines on external edge; elytra seriate-punctate; rest as in *Uloa*.

#### MICROCILIBE CASTANEUM, n.sp.

Nitid castaneous above and below, legs pale yellow.

*Head* coarsely, not closely punctate, epistoma rounded in front, antennæ rather short, eyes small and round. *Prothorax* subtruncate at apex, truncate at base, the former slightly produced forward in the middle, sides subarcuately converging from base to apex (front half more strongly narrowing than basal half),



anterior angles obtuse, posterior rectangular, lateral border narrowly horizontal, and separated from disc by a row of setiferous punctures, disc with fine punctures irregularly and diffusely placed. *Scutellum* arcuate-triangular, punctate. *Elytra* of same width as and closely fitting prothorax, shoulders rectangular, sides parallel to half-way, with a row of lateral setæ: rather widely rounded behind; seriate-punctate without a sign of striation, the punctures in series, rather widely distant; intervals each with a single row of even more widely placed punctures; these more distant on outside intervals. Underside with large, diffuse punctures. Tibiæ straight, slender, little widened at, and with a row of stout bristles near apex. Posterior tarsi with claw-joint approximately as long as the rest combined. *Dimensions*:  $3 \times 1\frac{1}{2}$  mm.

*Hab.*—Mount Wilson (Blue Mountains, N.S.W.).

I took seven specimens in a rotten *Eucalyptus* log during March of the present year (1919), and cannot find an existing genus for their reception. The 3-jointed club of antennæ, slight convexity of form, non-denticulate tibiæ, and non-striate elytra form a combination requiring a new generic status.

*Types* in Coll. Carter.

BRACHYCILIBE TASMANICUM, n.sp.

Reddish-brown, very convex.

*Head* coarsely, not closely punctate; joint 1 of antennæ very stout, 2 intermediate in thickness between 1 and 3, 3-8 submoniliform and closely packed, apical three forming a club, 9 and 10 strongly transverse and cupuliform, 11 round and large. *Prothorax* bulbous, the narrow lateral border not seen from above; base and apex truncate, sides evenly and rather widely rounded, all angles very obtuse, disc coarsely and rather distantly punctate. *Scutellum* small and bead-like. *Elytra* of the same width at base and less than twice as long as the prothorax, with about eight rows of foveate punctures on each elytron, placed in sulci, the punctures almost contiguous; intervals convex; front and mid tibiæ finely spinose on the outside edge, hind tibiæ flattened and expanded at apex; underside deeply pitted with



coarse, distant punctures; front coxæ very close. *Dimensions* : 3(vix)  $\times$  1(vix) mm.

*Hab.* - Wilmot, Tasmania (A. M. Lea and H. J. Carter).

Several specimens taken from rotten logs by Mr. Lea and myself, of which six are before me. The species is the smallest of all described Australian *Ulominæ*, and is near *Brachycilibe antennatum* mihi (from Lord Howe Island) in its convex, short form, coarse puncturation, and widely clavate antennæ, while differing in the proportions of the antennal joints. In *B. antennatum* the club is two-jointed, with the ninth somewhat enlarged. In both species the mandibles are bifid at the extremity.

*Types* in Coll. Carter.

*PTEROMELÆUS DARLINGENSIS*, n.sp.

Elongate-ovate, rather flat, moderately nitid, black above and beneath, antennæ and tarsi reddish-brown.

*Head* closely and finely punctate, epistoma narrowed in front, its suture indistinct, eyes remote, antennæ slender, the proportions similar to those in *P. gilesi*. *Prothorax* of same size and general outline as in *P. gilesi*, but the anterior angles obtusely blunted (not rounded), the posterior acute, not dentate, the explanate margins horizontal, extreme border not reflected, medial impression evident, but not always continuous; disc finely, distinctly punctate, the punctures smaller and less close than on head, closer and more distinct on the margins, basal foveæ deep. *Scutellum* triangular, punctate. *Elytra* of same width as prothorax at base and thrice as long, sides parallel for the greater part, explanate margins narrow (narrower than in *P. planus* Bless.), extreme border raised throughout; regularly seriate punctate, or substriate, fine punctures being set in scarcely defined striæ (the punctures much smaller than those in *P. planus*), the intervals minutely punctate and subplanate, the 1st, 5th, 9th, and 13th very feebly raised, and the 1st and 5th wider than the rest; seriate punctures evanescent at base and on apical declivity. Prosternum and flanks of metasternum finely pustulose, metasternum clearly punctate, abdomen striolate,

its apical segments finely punctate. *Dimensions*: 18.19  $\times$  9 mm.

*Hab.*—Bourke, N.S.W. (R. Helms).

Three specimens given me some time ago by the late Mr. R. Helms show a species near *H. abdominalis* Lea, in sculpture, near *H. memnonius* Pasc., in form. It belongs to Macleay's Sect. ii., Subsect. iii., and may be distinguished by the combination of large size, parallel form, moderately nitid surface, with unusually fine sculpture. It is quite distinct from *H. depressiusculus* Macl., which I have from the same district, and which has distinct costate intervals and larger seriate punctures. It is separated from *H. hepaticus* Pasc., by structural as well as colour differences. I can find no sexual characters.

Type in Coll. Carter.

PTEROHELÆUS GILESI, n.sp.

Ovate, rather convex, opaque piceous-black above, nitid black beneath, antennæ and tarsi castaneous.

*Head* and pronotum apparently quite smooth, epistoma rounded in front, its suture well defined at sides only, eyes separated by a distance little more than the width of one eye, antennæ robust, joint 3 as long as 4.5 combined, 4.7 obconic, 8-10 transverse, 11 ovate. *Prothorax* 4  $\times$  9 mm., length measured in middle, width at base, arcuate-emarginate at apex, strongly bisinuate at base, sides arcuately converging from base to apex (where it is less than half as wide as base), anterior angles well rounded but prominent, posterior acute and slightly dentate, explanate margins moderately wide, and subhorizontal, with extreme border slightly reflexed; disc rather convex, medial line clearly impressed, basal foveæ shallow. *Scutellum* smooth and rounded. *Elytra* of same width as prothorax at base and about thrice as long, ovate and rather convex, explanate margins widest at middle (here about one-fifth of width of an elytron), obsolete at apex, extreme border reflected; finely seriate-punctate, intervals quite flat and smooth, the 1st (sutural), 3rd, 5th, and 9th wider than the rest; the punctures evanescent towards apex, mere pin-pricks elsewhere, except on lateral row, where some six punctures of large size are apparent. (In the ♀ specimen the

two lateral rows contain larger punctures). Sternum smooth, abdomen striolate, apical segments smooth. In ♂ three basal joints of fore-tarsi much wider than 4th joint. In ♀ fore tarsi of normal size, body more convex. *Dimensions*: 19 × 9 mm.

*Hab.*—Broome, N.W.A. (H. Giles).

A pair, showing clear sexual characters, given me by their captor. The species is nearest *P. dispar* MacL. (in the 1st Section of that author), but differs from it in the following details:—different sexual characters, less convex and more oval form, falcate posterior angles to prothorax, and smooth undersurface. (In *P. dispar*, if correctly identified by me in specimens from Kookynie and Kalgoorlie, the prosternum is transversely rugose and the metasternum finely pustulose). *P. dispar* was described as from Swan River, but it must be noted that, until recently, the whole State was so denominated. With considerable experience in collecting, and with collectors in the Perth district, I have seen nothing like *P. dispar* from this neighbourhood.

*Types* in Coll. Carter.

*Pterohelurus reichei* Brême.—In my revision of this genus, I failed to identify, though having specimens before me, the larger Tasmanian species as Dr. Brême's insect. The figure given in that author's monograph shows prominently sculptured elytral costæ, which then seemed inconsistent with the Tasmanian specimens in the collections of Mr. Lea, and the Australian and Macleay Museums. In the last two cases, they were erroneously labelled *guérini* Br. Knowing the great difficulty in illustrating this form of sculpture with accuracy, and allowing for some exaggeration in this, I now concur with Mr. Champion in his identification of this species, which appears to be common in the northern parts of Tasmania.

*P. walkeri* Brême (= *P. riverinæ* MacL.).—Having re-examined the presumed types of *P. riverinæ* in the Macleay Museum, I am convinced that it is, at most, but a slight variety of *P. walkeri*; the differences noted being such as commonly occur in numerous and widely distributed species; the slight difference in distance between the eyes can be accounted for sexually.

*P. pascoei* MacL., is also under suspicion as a synonym of *P.*

*piceus* Kirby, one of the commonest of Australian insects; but I have undoubtedly two species, clearly separated by the size of seriate punctures of elytra, otherwise very similar. A cotype of *P. pascoei* from Gayndah was given me by the late Mr. Masters. After a close re-examination of the Macleay Museum specimens, I find my cotype to be nearer the species labelled *P. piceus*, while the differences between those labelled *P. piceus* and those labelled *P. pascoei* are slight. The species in my collection, showing *much finer* seriate punctures than either of these, from regions as widely separated as Wodonga (Vic.), and Endeavour River (N.Q.), is thus either a new species or the true *P. piceus* Kirby. Only an examination of the type of *P. piceus* will settle this question. I consider the specimens labelled *P. piceus* and *P. pascoei* in the Macleay Museum to be conspecific.

*P. abdominalis* Lea, (? *pruinus* Pasc.) is easily distinguished from the above by (1) the more parallel form, (2) much smaller seriate punctures, with irregular punctures of the same size on the intervals of the basal half, and (3) quite obsolete costæ.

#### SYMPETES BROWNI, n.sp.

Widely obovate, moderately convex, dull black, antennæ and tarsi castaneous.

*Head* finely rugose, epistoma truncate in front, sides raised and rounded, forehead with prominent ridges in front of eyes, antennæ short, joints 8-11 enlarged, round and of nearly equal size. *Prothorax* 3 × 10 mm., length measured in the middle, width at base, apex arcuate-emarginate, base bisinuate, anterior angles widely obtuse, posterior acute and falcate-wise, overlapping elytra; explanate margins wide, at base together nearly half total width, extreme border reflected at sides, narrowed on apex; disc with a few small punctures showing through the fine silky derm, central carina lightly raised. *Scutellum* very transversely triangular. *Elytra* of same width as prothorax at base, widest behind middle, margins wide and separated from disc by a row of large punctures, disc strongly carinate at suture throughout full length, surface punctures half concealed by derm; underside opaque, metasternum punctate, abdomen with lines of red, recum-

bent hair at margins of segments, epipleuræ smooth. *Dimensions*:  $15 \times 12$  mm.

*Hab.*—Cue, West Australia (Mr. H. Brown).

Another of Mr. Brown's discoveries, showing a species near *S. orbicularis* Brême, and *S. excisifrons* Cart., in convexity and outline, but distinguished from both as from *S. patelliformis* Pasc., by its thick clothing and opaque surface. From the last it is distinct by its greater convexity and wider form.

Type in Coll. Carter.

#### SYMPETES DEPRESSUS, n.sp.

Nearly round, depressed, black, glabrous, moderately nitid above, opaque beneath, antennæ and tarsi reddish.

*Head* minutely punctate, lightly ridged in front of eyes. *Prothorax*  $3 \times 10$  mm., length measured in middle, width at base: anterior angles subrectangular (lightly rounded at apex), posterior acute and overlapping elytra (also a little rounded at tips), margins wide, the disc forming half total width at base, apparently smooth, not carinate at middle (obsolete carina faintly indicated by slight convexity near middle front). *Elytra* depressed, widely margined, densely and clearly punctate (somewhat as in *S. patelliformis* Pasc.), the suture not, or scarcely, carinate: underside in general smooth, epipleuræ finely punctate. *Dimensions*:  $14-16 \times 11\frac{1}{2}-12$  mm.

*Hab.*—Geraldton, W.A. (H. Brown and W. DuBoulay).

Three specimens, 2 ♂ and 1 ♀, of which the female has the larger dimensions, show a species near *S. patelliformis* Pasc., in its flat form, differing from that species in (1) larger size, wider margins and still flatter form, (2) head with ante-ocular ridges, though much less raised than in *S. browni*, (3) prothoracic angles more rounded, and (4) elytral punctures larger, the suture scarcely carinate.

Types in Coll. Carter.

#### SARAGUS CONVEXUS, n.sp.

Lightly obovate, very convex, pale brown (head, disc of pronotum, and underside darker, where denuded of the pale, squamose clothing), elytra with short, upright, red hairs.

*Head* flat, punctate, epistoma truncate, labrum prominent, antennæ short, joints moniliform, the last three transverse. *Prothorax*  $2 \times 5$  mm, length measured in middle, width at base; apex semicircular, embracing nearly half the head, all angles rounded, the posterior rather narrow; sides converging and nearly straight, from base to apex; explanate margins wide, sub-horizontal, disc convex, roughly and rather closely granulose, showing smooth spaces along middle line; base bisinuate. *Elytra* slightly wider than prothorax at base, very convex, widest a little behind middle, without explanate margins, lateral border not seen from above (through convexity), each with three fine, linear, and slightly undulate costæ and a rudimentary fourth costa on side; the first and third extending from base to apical declivity, the second continuous for about two-thirds of length, an elongate nodule forming its continuation; the fourth costiform only for a short distance, thence represented by a few small, distant nodules; a few scattered nodules on apical region; suture quite flat, the whole covered with a pale, squamose meal, with short, upright hairs; underside and legs with close, short, hairy clothing; anterior tibiæ coarsely, intermediate finely serrated on outside. *Dimensions* :  $9 \times 6$  mm.

*Hab.* — Cambo-Cambo, Northern N.S.W. (S. W. Jackson).

A single specimen, given me by the late Mr. R. Helms, is nearest *S. lævicostatus* MacL., in general facies, but the costæ are more continuous; it is without the intermediate rows of nodules, the pronotum is more roughly granulose, *inter multa alia*. (The pronotum of *S. lævicostatus* MacL., is more rugose than granulose, showing small granules only near base. The presumed types in the Macleay Museum are larger than as given in the description, and they measure  $11-12 \times 7-7\frac{1}{2}$  mm.). The form of the elytra, without any sign of flange, and the hairy clothing, give it a likeness to *Trichosaragus pilosellus* Blackb., but the marginal prothorax and wider form proclaim it a true *Saragus*.

Type in Coll. Carter.

## OSPIDUS VESTITUS, n.sp.

Widely ovate, convex, nitid brown, upper surface obscured in patches by short, squamose clothing, underside and legs opaque reddish-brown, almost smooth.

*Head* subquadrate, epistoma widely rounded in front, without any sign of suture, surface rather flat, antennæ at rest (from below) extending to base of prothorax, last four joints considerably enlarged. *Prothorax*  $2\frac{1}{2} \times 5$  mm., semicircularly emarginate, enclosing head beyond eyes, widest at base, sides arcuately converging to apex, anterior angles obtuse, posterior acute, base sinuate and closely adjusted to elytra, surface lightly clothed with adpressed pale brown hairs. *Scutellum* triangular. *Elytra* of same width as prothorax at base, slightly widening behind this, thence roundly converging to apex, gibbous behind the scutellum; surface covered with close lines of large punctures, these lines by irregular punctures near middle; lateral depressions, basal and apical areas squamose. Legs short, femora not extending to sides of body, sternum carinate, underside finely rugose. *Dimensions*:  $8\frac{1}{2} \times 6\frac{1}{2}$  mm.

*Hab.*—King R., N. Territory (National Museum, Melbourne).

A single specimen, sex doubtful, sent by Mr. Kershaw shows a species quite distinct from its nearest ally *O. paropsoides* Cart., in its smaller size, squamose clothing, and different sculpture. The four species, so far described, of this interesting genus can be distinguished as follows:—

## OSPIDUS Pase.

- 1-6. Surface smooth.
- 2-4. Elytra irregularly punctate.
- 3. Colour brown-bronze, elytra finely punctate..... *chrysomeloides* Pase.
- 4. Colour chestnut-red with black spots, elytra coarsely punctate.....  
..... *gibbosus* Blackb.
- 5-7. Elytral punctures more or less longitudinally arranged.
- 6. Colour purple-bronze ..... *paropsoides* Cart.
- 7. Surface lightly squamose ..... *vestitus*, n.sp.

*Note.*—*Ospidus* was placed by Pascoe under *Helwinæ* as an ally of *Cilibe*. It now seems to me better placed amongst the *Cyphaleinæ*, where its carinate prosternum, metallic surface, non-



striate elytra, and general facies would place it not far from *Bolbophanes*.

*STYRUS PUNCTICOLLIS*, n.sp. (Plate iv., fig.3).

Elongate-ovate, opaque black, apical joints of antennæ brown, tarsi clad with golden tomentum.

*Head* closely rugose-punctate, antennæ with joint 3 as long as 4-5 combined, gradually increasing outwards, last four joints oval. *Prothorax* widest behind middle, base wider than apex, arcuate-emarginate at apex, front angles acute and produced, base subtruncate, sides moderately rounded, with an irregular more or less undulate outline, feebly sinuate behind, posterior angles subrectangular and, in general, scarcely dentate; lateral border thick and round, somewhat recurved, concave within; disc closely but not evenly punctate, with occasional smooth spaces, without medial line. *Scutellum* widely transverse, smooth. *Elytra* wider than prothorax at base, and more than twice as long, lightly obovate; surface irregularly alutaceous, the suture raised, and three irregular, shining, crenulate costæ occasionally connected by finer transverse ridges; the interstices everywhere showing large punctures; underside similarly pitted, the punctures smaller on apical segments. *Tibiae* nearly straight and unarmcd. *Dimensions*: 16-20 × 6½-8 mm.

*Hab.*—Capertee, N.S.W. (T. G. Sloane and H. J. Carter).

Twenty-one specimens taken in Dec., 1918 (during a very dry period), under logs or dead leaves, show a species allied to *S. latior* Cart., but differing as follows: sides of prothorax less widened, not sinuate anteriorly and much less so posteriorly, elytral costæ more sharply defined—the most definite distinction being the strongly punctate pronotum (that of *S. latior* being almost impunctate). There is considerable variation in the hind angles of prothorax, which in general are scarcely dentate, but in a few cases the sinuation is more marked and subangulate, forming a distinct tooth.

*Types* in Coll. Carter.



## BYALLIUS RETICULATUS PASC.

The inadequate description of this species makes its identification difficult, even with the accompanying figure (Ann. and Mag. Nat. Hist., Ser. 4, Vol. 3, Pl. x.), since the six described species are rather close, though distinct. Three specimens lately sent by Mr. Kerslake, labelled "Cassilis, Gippsland," belong, I consider, to the species which was wrongly identified by me when describing *B. ovensensis* (These Proceedings, 1909, p. 139) as an insect taken at Cunningham, Lakes Entrance, Gippsland. The Cunningham species, therefore, requires description and a name. I propose to preface this by the following description of what I consider to be *Byallius reticulatus* Pasc.:—

Black, little nitid, except legs; antennæ reddish, tarsi and apex of tibiæ clothed with golden tomentum.

*Head* closely, clearly punctate, labrum prominent, epistoma truncate in front, sharply angular at sides; antennæ with basal joints sublinear, apical three or four slightly enlarged, the third joint longer than fourth and fifth combined. *Prothorax* 5 × 6.5 mm., widest behind middle, anterior angles rather widely acute, and pointing forward, sides lightly rounded, *not* sinuate; posterior angles widely obtuse and depressed, base truncate, basal and apical border narrow, lateral border thick, strongly reflexed and nitid, surface clearly, rather closely, but not coarsely, punctate. *Scutellum* transverse, triangular. *Elytra* vermiculately rugose and wrinkled, each with three subobsolete costæ, evident on apical half; the whole surface also closely studded with round punctures, coarser than those on prothorax; epipleuræ finely, abdomen more coarsely punctate and longitudinally wrinkled, flanks of prosternum almost smooth, tibiæ nearly straight. *Dimensions*: 20 × 9 mm.

*Hab.*—Cassilis, Gippsland, Vic. (Dr. Leach).

Three examples, all, I think, female, from the National Museum. A fourth example sent by Mr. Kerslake, labelled "Buchan, Gippsland, Dr. Leach," shows a few, but strong, distinctions from the above, and must be at present considered as a variety or ♂ of *B. reticulatus*. Form narrower and more con-

vex, sides of prothorax sinuate in front, the acute anterior angles pointing obliquely outwards, lateral border less strongly raised, pro-tibiæ slightly, mid-tibiæ more strongly curved. *Dimensions*:  $19\frac{1}{2} \times 8$  mm.

*Hab.*—Buchan, Gippsland.

N.B.—A somewhat similar sexual difference in structure of prothorax exists in *Anausis metallescens* Westw., (*vide* These Proceedings, 1913, p.71). The identity of sculpture of the Buchan and Cassilis specimens, and the near neighbourhood of these places are reasons for considering the Buchan as the ♂ of the Cassilis specimens.

BYALLIUS PUNCTATUS, n.sp.

Elongate, obovate, subopaque black, elytra and legs more nitid, antennæ reddish; tarsi and apex of tibiæ clothed with golden tomentum.

*Head* as in *B. reticulatus*, but more coarsely punctate. *Prothorax*  $5 \times 7$  mm., arcuate-emarginate at apex, anterior angles sharply acute, pointing a little outwards and upwards, sides widest behind middle, thence arcuately converging gradually forward, more abruptly behind, sinuate near front and hind angles, the latter subrectangular and emphasized by the sudden termination of the strongly reflexed and thickened lateral border, base truncate; apex and base narrowly bordered, disc strongly but unevenly punctate, with a clearly defined, smooth, medial line and some smooth spaces near centre. *Scutellum* transversely triangular and punctate. *Elytra* lightly obovate, vermiculately rugose, with three well-raised wavy costæ, the intervals showing sparse, rather large punctures. Whole underside and legs coarsely and closely punctate, the abdominal punctures becoming finer and denser towards apex, the last segment very densely pitted. *Dimensions*:  $18 \times 8\frac{1}{2}$  mm.

*Hab.*—Cunningham (Lakes Entrance), Gippsland, Vic.

A single example taken by me in January, 1909, can be clearly distinguished from *B. reticulatus* by its strongly raised elytral costæ, its thinner and more vertically raised lateral border to prothorax, with its smooth medial line, sharper posterior angles,

and much more coarsely punctate surface above and below. All the other species have the pronotum much more finely punctate.

Type in Coll. Carter.

The six species may be distinguished thus:—

BYALLIUS.

- 1(3) Anterior angles of pronotum pointing forward.
2. Medial line of pronotum obsolete ..... \**reticulatus* Pasc.
3. Medial line of pronotum canaliculate ..... *mustersi* Cart.
- 4(10) Anterior angles of pronotum pointing outward.
- 5(7) Border of pronotum thick.
6. Hind angles of pronotum dentate..... *orensensis* Cart.
7. Hind angles of pronotum not dentate ..... *laticollis* Cart.
- 8(10) Border of pronotum not strongly thickened.
9. Border lightly reflexed, disc minutely punctate..... *kosciuskoanus* Cart.
10. Border strongly reflexed, disc strongly punctate ..... *punctatus*, n.sp.

BOLBOPHANES SERICATUS, n.sp.

Shortly ovate, very convex, (longitudinally and transversely) glabrous, moderately nitid; above, rich dark purple, underside, metallic blue; elytral suture greenish, pronotum with some varicoloured reflections; legs and antennæ violet.

*Head* densely punctate, epistomal suture straight, eyes separated by a distance equal to the diameter of one, antennæ rather fine, scarcely reaching base of prothorax, its joints slightly enlarging outwards. *Prothorax* 2.5 × 5 mm., widest at base, apex strongly emarginate, anterior angles rounded but prominent, base strongly bisinuate, median lobe widely produced; sides rounded, posterior angles rectangular, lateral margins thick on basal two-thirds, evanescent on anterior third. A rather wide concavity within this margin; disc densely and uniformly finely punctate; without trace of medial line. *Scutellum* equilatero-triangular, finely punctate. *Elytra* of same width as prothorax at base, slightly gibbous at shoulders; the whole surface with a satiny gloss, finely wrinkled and lined; the lines in the sutural region irregular; those on the disc and lateral regions becoming wavy but longitudinal (substriate), with transverse wrinkles of a

\* The male of this appears to come under 4, but has been differentiated from the other species as described above.

sinuate, vermiculate form; breast coarsely, episterna finely punctate; epipleuræ coarsely wrinkled, abdomen thickly striolate, the apical segment finely punctate. *Dimensions*:  $9.5 \times 6$  mm.

*Hab.*—Brisbane (Mr. H. Hacker).

A single specimen, sent by its captor, shows a species clearly differentiated from its allies, by its greater convexity and thick lateral margins of prothorax *inter multa alia*. The elytral sculpture is somewhat similar to that of *B. rugatus* Cart., but it is less nitid, with the transverse wrinkling more pronounced, while its pronotum is sculptured more like that of *B. varicolor* Cart. The sutural region is depressed.

Type in the Queensland Museum.

CARDIOTHORAX CONSTRICTUS, n.sp. (Pl. iv., fig.4; Pl. v., fig.10).

Head, pronotum, and underside black, elytra bronze, antennæ and tarsi reddish, the whole moderately nitid.

*Head* smooth, epistoma subtruncate, frontal impression square, with a few small, irregular depressions; antennæ stout. *Prothorax*  $4\frac{1}{2} \times 6$  mm., arcuate-emarginate at apex, anterior angles rounded, sides widely rounded with greatest width behind middle, then sinuately and strongly constricted to the widely dentate posterior angles, these directed obliquely outwards and downwards; a large basal fovea within these angles, base (between foveæ) truncate; foliate margins wide and horizontal, with distinct separating sulcus, and (in general) three setiferous punctures on each; disc smooth, with two punctures on front half, medial channel deep and clear. *Elytra* considerably wider than prothorax at base, shoulders wide, epipleural fold strongly reflexed, each elytron with eight deep sulci, intervals convex, smooth, and of equal width; underside glabrous and nitid; fore-tibiæ widened at apex and rather thickly clothed with pale red tomentum. The male having hind tibiæ greatly widened and hollowed within. *Dimensions*:  $18-19 \times 6.7$  mm.

*Hab.*—Capertee and Kandos (Mudgee Line), N.S.W. (H. J. Carter and T. G. Sloane).

A great many specimens taken at Capertee in Nov., 1918, and

four by Mr. Sloane at Kandos in Feb., 1918, show a robust species allied to *C. aripennis* Blackb., and *C. laticollis* Cart. In structure they are nearer the former, with the elytra the colour of the latter, and readily distinguished from both by the widely sinuate hind angles of prothorax. Compared with *C. aripennis* as follows:—Size, form, colour (except that *C. aripennis* has the elytra green-bronze), sexual differences very like *C. aripennis*. The chief differences are: (1) Prothorax generally narrower, the average of five specimens being *C. aripennis*  $5 \times 7$  mm., *C. constrictus*  $4\frac{1}{2} \times 6$  mm., but proportionately wider in front, with anterior angles less convergent. The lateral sulcus is also much less pronounced; (2) Hind angles more widely dentate, the prominent tooth pointing outwards (*see fig.*); (3) Raised border of pronotum finer; and (4) Without special feature mentioned by Blackburn "oblique carina" (rather *sulcus*, H.J.C.) "running across the foliaceous margins . . . cutting off the front angles." (My specimens of *C. aripennis* were taken at Mount Wilson and identified by Mr. Blackburn himself).

Types in Coll. Carter.

CARDIOTHORAX KERSHAWI, n.sp. (Plate iv., fig.6).

Elongate-ovate, nitid black, antennae brown (apical half opaque), tarsi reddish.

*Head*: epistoma rather sharply rounded in front, frontal "horse-shoe" impression well marked, having two large foveae within; antennae stout, its joints oval and enlarging outwards. *Prothorax*  $4 \times 4$  mm., widest before middle, considerably wider at apex than at base, anterior angles prominent and acute, sides converging behind and sinuate before the sublobate hind angles, the latter forming a blunt tooth pointing backwards; lateral border thickened and raised, base bisinuate; foliate margins moderately wide, containing two or three setae; disc with deep medial sulcus continuous throughout, and two irregular sulci not reaching apex, one on each side of middle line (each formed by two longitudinal foveae connected by a sulcus). *Scutellum* small. *Elytra* considerably wider than prothorax at base, and twice as long, shoulder (formed by epipleural fold) widely obtuse; sulcate, each

with nine sulci, the fifth interval rather wider and more raised—especially at base—than the others. Epipleuræ and abdomen smooth; legs thin, fore-tibiae slightly curved. *Dimensions*:  $15 \times 5$  mm.

*Hab.*—Townsville, Q. (Ejnar Fischer).

Two specimens, sent by Mr. Kershaw, after whom I name it, show no sexual distinctions and belong to a species intermediate between *C. encephalus* Pasc., and *C. rotundicollis* Cart. It can be distinguished from both by its narrow, subcordate prothorax, with thickened lateral border and posterior tooth directed backward. In both the other species this tooth is twisted outwards. In colour, and form of prothorax, there is a likeness to *C. cordicollis* Pasc., but it is smaller and narrower than Pascoe's species, and has, moreover, acute anterior angles (rounded in *C. cordicollis*).

Type in the National Museum, Melbourne.

CARDIOTHORAX MACLEAYENSIS, n.sp. (Plate v., fig.8).

Elongate-elliptic, brilliant violet-bronze, antennæ and tarsi reddish-brown, underside and legs black.

*Head* with scattered punctures on frontal area. *Prothorax* subcordate, widest before middle, little convex, finely bordered at base, apical border obsolete in middle, anterior angles prominent but wide; sides widely rounded on anterior half, contracted at base; the dentate hind angles small and outwardly directed, base truncate; foliaceous margins wide and separated from disc by strong sulcus; disc smooth, medial sulcus well marked throughout, a triangular depression near hind angles, and (in general) one foveate puncture on each side of medial sulcus. *Scutellum* small, oval. *Elytra* wider than prothorax at base, elliptic, shoulders very obtusely rounded; sulcate, each with five well marked sulci and a sixth (external) faintly marked; intervals regular, convex, not connected and obsolescent at apex, sides, epipleuræ, and underside smooth; legs thin, without any sexual distinction, tibiae not thickened at apex. *Dimensions*:  $15 \times 5\frac{1}{3}$  mm.

*Hab.*—Macleay River, N.S.W. (S. Jackson).

Five specimens, given me some years ago by the late Mr. R.

Helms, were not previously described, as I then considered the species possibly conspecific with *C. captiosus* Bates, (from Cape York). A specimen was sent to the British Museum for comparison with this species, and Mr. Blair answered my query very definitely "No! Bates' species has the thorax much less cordiform, the elytra flatter on the disc and not so gradually rounded to the declivous sides"; also, in *C. captiosus*, "the transition" (from foliate margins to disc) "is gradual" (without separating sulcus). The hind angles of *C. nucleayensis* are very much as in *C. aricollis* Pasc., to which it bears a close likeness, but may be distinguished by (1) more brilliant coppery surface, (2) more cordate form of thorax (widest at middle in *C. aricollis*), and (3) five striae only on each elytron, distinct, these not connected behind.

Type in Coll. Carter.

CARDIOTHORAX ALTERNATUS, n.sp. (Plate v., fig.7).

Elongate-ovate, opaque brown-black; antennae, palpi, and tarsi chocolate-brown, legs and underside nitid black.

*Head*: labrum advanced, epistoma evenly rounded, its suture straight, with lateral sutures running obliquely to the front of epistoma and backwards to the eye, enclosing the sharply raised canthus; antennae stout, its joints obconic, thickening outwards, 1-5 nitid; forehead with usual depression, containing a central fovea. *Prothorax* arcuate-emarginate at apex, apex wider than base (as 7 to 5), the latter feebly arcuate; anterior angles advanced, subrectangular, the points a little blunted; sides moderately rounded to near base, then rather suddenly constricted and sinuate, forming a widely dentate hind angle, twisted downwards and outwards; foliate margins horizontal, with narrow border throughout; disc rather flat, with clear-cut medial sulcus, two foveae on each side of this (more or less connected by impressed line) and a foveate depression towards the posterior angles. *Scutellum* oval. *Elytra* wider than prothorax at base; sulcate, with nine convex intervals, the 1st (sutural), 3rd, and 5th wider than the rest, the 7th, 8th, and 9th rather sharply carinate, an

indistinct row of punctures outside the 9th interval; humeri rounded, showing carinate epipleural fold, underside smooth, tibiae near apex and tarsi with red tomentum. *Dimensions*: ♂ 15×5 mm., ♀ 17×6 mm.

*Hab.*—Wingham, N.S.W. (W. DuBoulay).

I am indebted to Mr. DuBoulay for specimens of this, three of which are under examination. The sexual differences are as in *C. rugosus* Cart., i.e., ♂ with narrower form, humeri squarer and more prominent, hind tibiae thinner. It also resembles *C. rugosus* in the form of the prothorax, but may be easily distinguished from that species by the less widely rounded sides of prothorax, with sharper anterior and wider posterior angles, the last less outwardly directed, while the elytral intervals are not undulate, nor do the sulci contain punctures.

*Types* in Coll. Carter.

*Note.*—The six species described since the publication of my Table of *Cardiophorus* (Trans. Roy. Soc. South Aust., 1914, pp. 395-8) may be added as follows, following the numbers of that Table.

- A. Posterior tibiae widened in male; foliate margins of pronotum limited by sulcus, posterior tooth prominent.
  - 31. Posterior tooth subrectangular ..... *aripennis* Blackb.
  - 31a. Posterior tooth very acute and pointing outward... *constrictus*, n.sp.
- B. Tibiae without sexual characters, posterior angles dentate.
  - 39. Posterior tooth pointing outwards ..... *ancephalus* Pasc.
  - 39a. Posterior tooth pointing backwards ..... *kershawi*, n.sp.
- C. Posterior tooth of prothorax very small, shoulders distinct.
  - 57. Elytra each with six well marked sulci ..... *aricollis* Pasc.
  - 57a. Elytra each with five well marked sulci ..... *nucleayensis*, n.sp.
- D. Species subopaque, sides of prothorax entire, posterior tooth depressed and acute.
  - 89. Elytral intervals unequal, alternately costiform ..... *haagi* Bates.
  - 89a. Sixth interval broken, flattened and punctate, seventh and eighth narrow.. ..... *interstitialis* Carter.
- E. Species quite opaque.
  - 89. Elytral intervals undulate ..... *rugosus* Carter.
  - 90. Elytral intervals not undulate.
  - 91. Foliate margins wide and horizontal, elytra sulcate... *alternatus*, n.sp.
  - 92. Foliate margins narrow, elytra punctate-striate ... *asperatus* Carter.



## ADELIUM DELICATULUM, n.sp. (Plate v., fig. 21).

Dark bronze (coppery on pronotal margins), glabrous, subnitid above, very nitid beneath, antennæ and tarsi castaneous.

*Head* closely, evenly punctate, clypeal suture straight; antennæ extending to base of prothorax, joint 3 not as long as 4-5 combined, 6-9 subtriangular, 11 large and oval. *Prothorax*: apex arcuate, base truncate, sides widely rounded, widest behind middle, thence converging to the acute front angles, sinuately narrowed behind, posterior angles rectangular; disc closely and rather regularly punctate, with a few fine ridges, a well-defined medial furrow throughout and two defined foveæ at base, one near each angle; explanate margins not clearly differentiated from disc, but containing larger and more distant punctures. *Elytra* wider than prothorax at base, shoulders rounded, tapering rather finely at apex, each with nine interrupted striae and the sutural stria uninterrupted; the interruptions irregular; the sixth stria more or less a series of punctures, intervals equal, flat and smooth. *Prosternum* and epipleuræ coarsely punctate, last segment of abdomen thickly punctured, other segments smooth. Male with anterior tarsi enlarged. *Dimensions*:  $8\frac{1}{2}$ -9  $\times$   $3\frac{1}{2}$ -4 mm.

*Hab.*—Brisbane, Q. (Mr. H. W. Cox).

Mr. Cox generously gave me a pair of the above some time ago, when I erroneously diagnosed it as a var. of *A. geminatum* Pasc. A close examination shows it to be very abundantly distinct, though its general form and elytral sculpture are similar. The differences are best shown by the following comparison.

<i>A. geminatum.</i>	<i>A. delicatulum.</i>
Size larger; length, 10-12 mm.	smaller; length, $8\frac{1}{2}$ -9 mm.
<i>Antennæ joints</i> subconic, nowhere transverse.	subtriangular, 2 penultimate joints (at least) transverse.
<i>Pronotum</i> coarsely rugose-punctate, with smooth spaces, posterior angles acutely pointing outwards.	closely punctate (a few fine ridges only), posterior angles rectangular.
<i>Elytra</i> : alternate intervals wider and convex.	intervals equal and flat.
<i>Prosternum</i> smooth.	coarsely punctate.

Types in Coll. Carter.

ADELIUM MCCULLOCHI, n.sp. (Plate v., fig. 11).

Ovate, robust, nitid bronze, glabrous, legs greenish-black, antennæ red.

*Head* coarsely, not closely punctate, antennæ with joint 3 as long as 4-5 combined. *Prothorax* arcuate at apex, truncate at base, anterior angles obtuse, sides widely rounded, sinuate behind, posterior angles widely rectangular; disc with shallow and ill-defined medial channel, irregularly and rather coarsely punctate, with some scattered foveæ; foliate margins horizontal and separated from disc by short sulcate foveæ. *Elytra* striate-punctate, the seriate punctures of unequal size, intervals more or less convex, pustulose on the posterior half; underside and epipleuræ nearly smooth. *Dimensions*:  $16 \times 7\frac{1}{2}$  mm.

*Hab.*—Walcha (New England District, N.S.W.; A. R. McCulloch).

Three specimens in the Australian Museum, taken by Mr. McCulloch, after whom I name the species, show an ally of *A. pustulosum* Blackb., and of *A. subdepressum* Cart. From both, it is readily distinguished by the well marked sinuation of the posterior sides of the prothorax, and the widely rectangular posterior angles.

Type in the Australian Museum, Sydney.

*Adelium abbreviatum* Boisd.—With a large amount of material from widely separated districts of Tasmania, I have been much exercised with the vagaries of variation in this species. Here is a fine field for the species maker. Nevertheless, though there is good evidence of species in-the-making, I am inclined rather to withdraw one of my own species, *A. foveatum*, into the ranks of a *variety* rather than add to the confusion of this difficult genus. As other students of the group may differ from this view, I propose below to name and describe certain apparently fixed varieties, first describing what I consider to be the typical form, from the Hobart district, a certain collecting ground of the Astrolabe voyagers.

## A. ABBREVIATUM Boisd. (Plate v., figs. 13, 14).

*A. impressum* Blanch.

Wide, rather flat, moderately nitid bronze, tarsi reddish.

*Head* distinctly, not closely, punctate, with a transverse frontal impression: antennæ having joint 3 shorter than 4-5 combined, 4-7 ovate, 8-10 increasingly widened, 11 pear-shaped,  $1\frac{1}{2}$  times longer than 10. *Prothorax* moderately convex, widest behind middle, base subtruncate, apex arcuate-emarginate, front angles rounded, sides widely and rather evenly rounded, lightly ( $\sigma$ ) or not ( $\varphi$ ) sinuate behind; posterior angles obtuse; disc lightly (or not) channelled in middle, with a few irregular foveæ (one more regularly placed near sides), a few large setiferous punctures (these more thickly set on explanate margins), and a fine, close system of punctures throughout. *Elytra* wider than prothorax at base, widely ovate and depressed, finely striate-punctate (striae often more or less obliterated), intervals flat, the 2nd, 4th, 6th, and 8th (on sides) wider than the rest, and containing irregular series of shallow, foveate impressions; these sometimes single, sometimes forming or containing groups of smaller punctures, the 1st (sutural) generally smooth (sometimes with one or two small setæ), 3rd and 5th with setiferous punctures, from which spring long, upright, white hairs; epipleuræ strongly punctate, abdomen and sternal regions rather smooth, the latter with sparse setæ sending out white hairs; intercoxal process rather squarely rounded. *Dimensions*:  $9-12 \times 4\frac{3}{4}-6$  mm.

*Hab.*—Hobart, Strahan, Waratah, Great Lake District, Mole Creek, Launceston, etc.

Var. A. *dentatum*, n.var. (Plate v., fig. 15).—With sides of prothorax clearly sinuate behind, the posterior angle acutely dentate and pointing outwards, the anterior angles obtusely pointed. *Dimensions*:  $12 \times 5$  mm. in  $\sigma$ :  $12 \times 6$  mm. in  $\varphi$ .

*Hab.*—Tyenna (C. E. Cole).

Two specimens given me by Mr. Cole from a series of similar form taken by him.

Var. B. *lomondense*, n.var.—The pronotum with many large, setiferous punctures, and proportionately more pilose: these setæ

overflowing on to the frontal area of the head; elytra with coarser sculpture than typical form, seriate punctures larger, the interstitial setæ larger and more numerous, the humeral, basal, and epipleural regions especially showing coarse, irregular punctures with long, white hairs. *Dimensions*:  $11 \times 5\frac{1}{2}$  mm.

*Hab.*—Ben Lomond, 4,000 ft. alt. (A. Simson).

Var. C. *latum* Pasc. (Plate v., fig. 16).—More convex and nitid than the typical species; sides of prothorax evenly rounded without simulation, the posterior angles widely obtuse; elytra with coarser punctures and pilosity as in Var. B.

*Hab.*—Melbourne, Vic. (Aust. Mus.); West Tamar (A. Simson). Launceston (C. E. Cole).

Var. D. *foveatum* Carter. (Plate v., fig. 17).—Form very flat, pronotum more rugose, elytral foveæ larger. *Dimensions*:  $10 \times 4\frac{1}{2}$  mm.

*Hab.*—Mount Horror (Scottsdale District, Tasmania).

Of the above varieties, A and C are the most distinct, but intermediate forms between each of these and the typical form occur, so that I have sometimes found it difficult to say whether a specimen is actually *abbreviatum* or *latum*, while Plate v., figs. 13 and 14, show the variations in "hind angle of thorax" in typical forms. Hence arise my reasons for considering these as variations.

SEIROTRANA SIMSONI, n.sp. (Plate v., fig. 18),

Oval, black-bronze, palpi, tarsi, and coxæ yellow, antennæ (six joints only present) castaneous.

*Head* sparsely punctate, epistomal suture arcuate and deeply impressed, antennæ with joint 3 not as long as 4-5 combined, 4-6 subconic, rest wanting. *Prothorax*  $2\frac{1}{2} \times 3\frac{1}{2}$  mm., lightly emarginate at apex, subtruncate at base, anterior angles obtusely rounded, sides well rounded, widest at middle, sinuate behind, posterior angles rectangular; disc covered with close, fine, shallow punctures, with a few larger setiferous punctures near sides and apex, without medial line or distinct foliate margins, extreme border fine and scarcely raised throughout. *Scutellum* triangular

and apparently smooth. *Elytra* slightly wider than prothorax at base and less than thrice as long; seriate-punctate, each with nine rows of close, round, deep punctures (slightly larger than those in *Licinoma (Adelium) nodulosa* Champ.), intervals flat, the 1st, 3rd, 5th, and 7th with larger setiferous punctures; on the intervals also a row of small nodules perceptible, besides some almost microscopic punctures; epipleuræ punctate, prosternum and abdomen nearly smooth; intercoxal process arched.

*Dimensions*:  $12 \times 4\frac{1}{2}$  mm.

*Hab.*—Ben Lomond, Tasmania (at 4,000 ft. altitude).

A single specimen in the Simson Coll. should be placed in Group ii. of my Table (These Proceedings, 1908, p.398) under *S. punctifera* Macl., from which it is easily distinguished by smaller size, darker colour, *et multa alia*. The interstitial setæ are large and distinct, while the nodules are only to be seen by close scrutiny.

Type in the South Australian Museum.

*Note.*—In my Table of *Seirotana* (These Proceedings, 1908, p.397), I distinguished *S. vicina* from *S. proxima* Pasc., by its depressed form. With more material of both species, I find this distinction of doubtful value. Their sculpture is, however, widely different, and they should be thus separated.

Elytral intervals smooth, alternately bearing rows of elongate or small shining nodules .....	<i>proxima</i> Pasc.
Elytral intervals densely punctate, alternate rows of small nodules absent. ....	<i>vicina</i> Cart.

#### LICINOMA PUNCTA-LATERA, n.sp.

Elongate-convex, nitid black, antennæ piceous, tarsi red.

*Head* with convex epistoma, limited behind by a straight suture with branches at each side, at right angles, extending to the eyes; coarsely punctate; antennæ moniliform, 3rd joint slightly longer than the 4th, apical four considerably and successively enlarged, 11th twice as long and wider than 10th; eyes small. *Prothorax* subrhomboidal, length equal to breadth, apex lightly arcuate, front angles rounded and feebly advanced, apex wider than base, the latter truncate, sides arcuately converging

to base, posterior angles obtuse; disc closely, finely, but clearly punctate, with feeble indications of a medial line in some examples, one or two setiferous punctures near sides, and a *regular row of closely set punctures immediately within the narrow border*. *Scutellum* nitid and bead-like. *Elytra* wider than prothorax at base and more than twice as long, punctate-sulcate, the intervals clearly convex, of even width, the 3rd with a seta slightly behind the middle; the flanks of sternum with deep, round, scattered punctures, the narrow epipleuræ also punctate, abdomen smooth and nitid. *Dimensions*:  $9-11 \times 2\frac{3}{4}-3\frac{1}{2}$  mm.

*Hab.*—Capertee, N.S.W. (T. G. Sloane and H. J. Carter).

Eleven specimens taken show a species clearly distinct from *L. sylvicola* Blackb.,—which was also common in this region—by the following comparison.

*L. sylvicola.*

*Size*: larger and wider.

*Pronotum*: sides more rounded, disc nearly smooth (in general with two large foveæ).

*Elytra* punctate-sulcate, intervals flat.

*S. nitidissima* Lea, is a much shorter insect, with very transverse thorax. The lateral row of punctures on prothorax is a rare character in this and allied genera.

*L. puncta-latera*, var.—Three examples taken by myself near Orange have dark castaneous legs, but are, I consider, conspecific with the above.

*L. puncta-latera.*

narrower and more convex.

sides less rounded, disc clearly punctate, with lateral row of larger punctures.

punctate-striate, intervals convex.

BRYCOPIA DIEMENENSIS, n.sp. (Plate v., fig.19).

Oblong-ovate, robust, dark bronze; legs, antennæ, and palpi pale red.

*Head* with sparse, coarse punctures, epistomal furrow deep and straight, forehead convex, eyes small but prominent, antennæ short (not extending to base of prothorax), moniliform, and rather slender, 3rd joint little longer than 4th, apical joints slightly enlarged. *Prothorax*  $2 \times 3\frac{1}{2}$  mm., convex, subparallel,

apex and base truncate (or nearly so) and almost equally wide, sides scarcely (or very feebly) rounded, anterior angles widely rounded, the posterior subrectangular; margins not explanate, the narrow lateral border not evident from above, disc rather coarsely and not very closely punctate, with some larger setiferous punctures irregularly scattered, and without any vestige of medial line. *Elytra* wider than prothorax at base and twice as long, shoulders rather squarely rounded, showing the reflected epipleural fold, sides scarcely widened behind middle: apical declivity steep; striate-punctate, each with about nine striae containing round punctures of uniform size, distant from each other about the diameter of one; intervals of even width, clearly punctate, the 3rd, 5th, and 7th containing some larger setiferous impressions. In the male, the basal joints of front tarsi enlarged. *Dimensions*: ♂,  $7 \times 3$  (vix) mm.; ♀, slightly smaller.

*Hab.*—Tasmania (Hobart and Waratah).

Three specimens examined, one ♂ (slightly immature) taken at Hobart by the late Dr. C. D. Clark, one (♂) given me by Mr. Lea some time ago; the third specimen (♀) was taken by Mr. Lea or myself, at Waratah. The species would come in my Table (These Proceedings, 1909, p.156) nearest *B. femoralis*, than which it is a shorter, more convex insect, with larger seriate and smaller interstitial punctures on the elytra, and of darker colour *inter multa alia*.

*Types* in Coll. Carter.

[Since writing the above, I find two specimens in Mr. Simson's Collection, one labelled Mt. Wellington; the other, from Launceston, varies from the type in having darker legs.]

BRYCOPIA PUNCTATISSIMA, n.sp. (Plate v., fig.20).

Oblong-oval, brilliant golden-bronze, antennæ and legs dark, tarsi reddish.

*Head* coarsely and sparsely punctate, forehead flat, epistomal furrow arcuate, with lateral branches extending at right angles before the eyes, antennal orbits prominently raised, eyes prominent, antennæ long (extending slightly beyond the base of

prothorax), its joints unusually stout, moniliform, 3rd slightly longer than 4th, the apical four considerably and successively widened, the last oval and large. *Prothoracæ*  $2 \times 2\frac{1}{2}$  mm., apex arcuate, base subtruncate, widest at middle, sides well rounded and sinuate behind; anterior angles obtuse, posterior acute; disc very coarsely punctate, the punctures close on the subexplanate margins, more distant on central part; with two discal foveæ and other smaller depressions, and with a slight rugosity near posterior angles. *Elytra* wider than prothorax at base, and twice as long, shoulders rounded, sides subparallel to beyond the middle; striate-punctate, with nine deeply impressed striæ, containing round, moderately large, closely-placed punctures; intervals subconvex and distinctly punctate, the 3rd and 5th much wider than the rest and bearing setiferous impressions. Whole underside punctate, the flanks of prosternum and epipleuræ coarsely so. *Dimensions*:  $6\frac{1}{2}$ -7  $\times$   $2\frac{1}{2}$  mm.

*Hab.*—Exeter, N.S.W. (H. J. Carter).

Two examples, I think the sexes, taken by me in November, 1911. The species comes nearest *B. cheesmani* mihi, in its wide and depressed form, but is easily distinguished by the following combinations: coarsely punctate surface, brilliant colour, wide 3rd and 5th elytral intervals, and robust antennæ. In *B. cheesmani* the elytral intervals are quite flat, the striæ very fine, and seriate punctures small.

*Types* in Coll. Carter.

#### AMARYGMUS INCULTUS, n.sp.

Ovate, moderately convex, black, nitid.

*Head* minutely punctate; eyes rather widely separated (at least full width of one eye); antennæ with last five joints considerably enlarged, 7-10 rhomboidal. *Prothoracæ* with sides arcuately converging from base to apex, anterior angles slightly advanced and (seen from above) acute, posterior widely obtuse; disc lævigatæ, or only microscopically punctate, with the faintest suggestion of a median line. *Scutellum* triangular, finely punctate. *Elytra* convex, finely striate-punctate, intervals quite flat and impunc-



tate, the punctures in striae small, uniform, and close; underside nearly smooth, the abdomen finely striolate; tarsal clothing black.  
*Dimensions:*  $9 \times 5$  mm.

*Hab.*—Oempili, N. Territory (Mr. Cahill).

Two specimens, sent by Mr. Kershaw, show a species near *A. perplexus* Blackb., in general facies, but differing as follows: slightly larger—especially wider; eyes more distant, apical joints of antennae much wider; sides of prothorax more arched, anterior angles more advanced; *elytral intervals quite flat*; tarsal clothing black (red in *A. perplexus*).

Type in National Museum, Melbourne.

#### EXPLANATION OF PLATES IV.-V.

##### Plate iv.

- Fig. 1.—*Stigmodera octosignata*, n.sp.
- Fig. 2.—*Evaugeltus rufipennis*, n.sp.
- Fig. 3.—*Styrus puncticollis*, n.sp.
- Fig. 4.—*Cardiothorax constrictus*, n.sp.
- Fig. 5.—*C. rugosus* Cart.
- Fig. 6.—*C. kershawi*, n.sp.

##### Plate v.

- Fig. 7.—*Cardiothorax alternatus*, n.sp.
- Fig. 8.—*C. macleayensis*, n.sp.
- Fig. 9.—Prothorax of *C. eripennis* Blackb.
- Fig. 10.—Prothorax of *C. constrictus*, n.sp.
- Fig. 11.—Prothorax of *Adelium McCullochi*, n.sp.
- Fig. 12.—Prothorax of *A. pustulosum* Blackb.
- Figs. 13, 14.—*Adelium abbreviatum* Boisd.
- Fig. 15.—*A. abbreviatum* Boisd., var. *dentatum*, n.var.
- Fig. 16.—*A. abbreviatum* Boisd., var. *latum* Pasc.
- Fig. 17.—*A. abbreviatum* Boisd., var. *forcatum* Cart.
- Fig. 18.—*Scirotrana simsoni*, n.sp.
- Fig. 19.—*Brycopia diemenensis*, n.sp.
- Fig. 20.—*B. punctatissima*, n.sp.
- Fig. 21.—*Adelium delicatulum*, n.sp.